**INTERNATIONAL RESCUE COMMITTEE**
**SIERRA LEONE PROGRAM**

# QUARTERLY REPORT

## STRENGTHENING INFECTION PREVENTION AND CONTROL (IPC) IN GOVERNMENT HOSPITALS IN SIERRA LEONE

**(AGREEMENT NO: AID-OFDA-G-15-00098)**

**1 JULY – 30 SEPTEMBER 2015**

**PRESENTED TO:**
**THE USAID OFFICE OF FOREIGN DISASTER ASSISTANCE**

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## I. Executive Summary

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|---|---|
| **PROGRAM TITLE:** | Strengthening Infection Prevention and Control (IPC) in Government Hospitals in Sierra Leone |
| **PROJECT NO:** | AID-OFDA-G-15-00098 |
| **AGENCY:** | International Rescue Committee (IRC) |
| **COUNTRY:** | Sierra Leone |
| **CAUSE**: | Ebola Virus Disease Outbreak |
| **REPORTING PERIOD:** | 1st July 2015 – 30th September, 2015 |
| **GOAL:** | To improve Infection Prevention and Control (IPC) knowledge, practices, and infrastructure in 19 government hospitals in Sierra Leone |
| **OBJECTIVE(S):** | To improve safety of routine essential health services and protect health care workers (HCWs) and patients in government hospitals from nosocomial infections by educating HCWs; implementing standard operating practices; and monitoring hospital staff's adherence to the SOP. |
| **BENEFICIARIES:** | Total targeted: 4,890 (health workers) and 5,687,150 individuals.<br>Indirect IDP beneficiaries: N/A |
| **LOCATION:** | Bo, Bombali, Kambia, Kailahun, Kenema, Kono, Moyamba, Port Loko, Pujehun, Tonkolili, Western Urban, and Western Rural, Sierra Leone |
| **DURATION:** | Twelve Months |

## I. Introduction

During the reporting period from July to September 2015, there have been marked reductions in Ebola virus disease (EVD) caseload and an increasing geographic confinement of the outbreak. The number of confirmed cases per month reduced from 27 in July (across 4 districts), to 3 in August (across 3 districts), before rising slightly to 6 in September (across two districts). Overall, the number of confirmed EVD cases decreased from 121 cases between April and June to only 36 cases between July and September. Despite notable improvements in surveillance and response capacity, the cases that occurred during the previous quarter were illustrative of the ongoing risks that the region will continue to face over the coming months as the outbreak subsides. These include the risk of imported cases, as demonstrated in July when a contact of a previous EVD case traveled from Freetown to Tonkolili and subsequently infected two others, as well as the ongoing challenge of late detection, as occurred in Kambia during August when an EVD-positive woman was detected only after her death and resulted in five secondary cases. The death of an EVD-positive adolescent female from a village in Bombali with no recent active transmission also raises the concern of sexual transmission from EVD survivors, which is widely regarded as possible but further research is needed before it can be definitively ascertained[1]. In short, these cases highlight the need for continued vigilance in the coming months, as international support draws down and the risk of complacency increases among both the general population and response personnel alike.

Protecting health workers and patients at all health facilities has been a key strategy within the EVD response. Patients with EVD still present to non-EVD facilities, posing a risk of transmission to healthcare workers (HCW), facility staff, other patients and visitors. Since the start of the outbreak, there have been 307 EVD cases and 221 deaths of HCWs in Sierra Leone[2], leading to fear among HCWs and patients, resulting in reduced availability and utilization of routine essential health services. Maintaining IPC precautions, instituting strict screening and isolation procedures, and determining appropriate modifications for routine services are essential measures for ensuring the safety of the healthcare work force. The risk of hospital-associated transmissions is twofold in an EVD outbreak: 1) direct transmission of EVD from a patient (or other staff) to the HCW and subsequently, 2) risk of transmission from the HCWs to their family and community. Modifications to routine services offered (e.g. labor and delivery, lab testing) at government health facilities are necessary to prevent transmission of EVD.

This program provides support to Sierra Leone's Ministry of Health and Sanitation (MoHS) to implement a comprehensive program to support IPC trainings and intensive supervision in 19 government hospitals in response to the danger that nosocomial transmission poses to the provision of health care services in the hospital. The EVD outbreak poses a serious threat to the continuation of health care at the tertiary level in Sierra Leone, as delivery of health services is extremely difficult where patients and staff fear contracting Ebola through routine interactions. To respond to this threat, the designated ERC partner supported Patient Safety Committees (PSCs) and a designated IPC focal point in each targeted hospital to implement trainings and to monitor staff adherence to the standard operating procedure (SOP) for "*Safe Provision of Hospital Services during an Ebola/Viral Hemorrhagic Fever (VHF) Outbreak*". The initial IPC master training was held over two weeks in February and March 2015, with attendance from MoHS IPC focal points and ERC staff. The ERC partners rolled out the IPC trainings in 19 government hospitals, to 4,890 hospital staff, covering both clinical and support functions in each hospital. By September 30th, all staff in 17 out of the 19 targeted hospitals had received the initial comprehensive training on IPC, as well as refresher trainings as needed. The ERC-seconded IPC mentor continued to support the appointed MoHS Hospital Focal

[1] Ebola RNA Persistence in Semen of Ebola Virus Disease Survivors — Preliminary Report, *The New England Journal of Medicine*, October 14, 2015
[2] World Health Organization, Ebola Situation Report, 15 October 2015

Persons. By providing daily supportive supervision, on-the-job training and mentoring based on identified areas of weakness, the ERC will continue to work with the MoHS and support them to ensure health workers feel confident to continue to safely provide health care to their communities, and will be able to take necessary steps to immediately correct any mistakes as they are identified.

This report describes the activities implemented during July 1st – September 30th, 2015 in the 19 hospitals that ERC is supporting with funding from OFDA. The program is part of a larger National IPC project, which is targeting all 25 government hospitals.

## II. Summary of Activities

***Placement of NGO Infection Prevention and Control Mentors***

Four hospitals did not have an IPC mentor in post for the entirety of the reporting period. However, by September 30th, the partners with open mentor positions had completed the recruitment process and all the hospitals had an IPC mentor stationed at each of the 19 supported hospitals. During the reporting period, the mentors worked with the IPC Focal Person to improve and sustain IPC implementation through on the job training, IPC supervision and strengthening hospital IPC systems. The focus of the mentor/IPC Focal Person relationship was on building the capacity of the IPC Focal Persons to play an increasingly central role in coordinating IPC activities in the hospitals. Some of the skills imparted to IPC Focal Persons through mentorship during the quarter included mentoring the IPC Focal person to facilitate both formal and on the job trainings, IT skills (data entry, creating spreadsheets for stock tracking, making PowerPoint presentations and report writing), chairing meetings and conducting systematic IPC supervisions.

***Health Care Worker Training***

In the previous quarter, ten hospitals completed the IPC training for clinical and support staff. Between July 1st and September 30th, seven out of the remaining nine hospitals completed the training. Connaught Hospital, a large facility with a staff complement of over eight hundred, continued the IPC training throughout the reporting period and is expected to complete the training in October 2015. The delayed signing of the Service Level Agreement between Concern Worldwide and the Sierra Leone Ministry of Health and Sanitation resulted in a delayed start date for the training at Magburaka Government Hospital. The training started in early September and by September 30th, 102 out of the 116 HCWs employed at the hospital had received IPC training. In total during this reporting period, 1,632 clinical and support staff received IPC training. This formal training was followed by continuous on the job training to consolidate IPC adherence. Topics covered during on the job training were developed from gaps identified during IPC ward rounds. Some of the areas addressed during on the job training included adherence to hand hygiene, recommended sharps management and environmental decontamination.

***IPC Ward Rounds***

IPC Mentors continued to work closely with IPC Focal Persons to monitor adherence to IPC practices through IPC ward rounds. Staff conduct these ward rounds daily in the supported hospitals, and include monitoring IPC compliance, reviewing IPC supplies, and identifying gaps for on the job training. ERC partners have developed various IPC monitoring tools and checklists to support the IPC ward rounds. An in-depth ward assessment tool was designed to assess ward level availability of IPC supplies, hand hygiene practices, environmental hygiene, waste management and patient screening, and was successfully piloted at Koidu Government Hospital. By the end of the reporting period, the ERC rolled out the tool to all supported hospitals to facilitate collection of uniform data across the partners. This tool, in addition to providing information on how the different departments are performing at institutional level, will enable comparison of IPC performance across hospitals. The ERC will report results from the harmonized ward assessment tool in the next reporting period.

***Screening***

All supported hospitals have screening points at the entrance to each hospital, manned by dedicated screening staff. Hospital staff screen all patients, visitors, and HCWs, who must perform hand hygiene before gaining access to the hospital. Screening entails taking the patient's body temperature and asking standard questions to rule out EVD signs and symptoms. Any patient or visitor who meets the EVD case definition according to the screening algorithm is safely moved to the isolation area for further investigation. In addition, during the reporting period, all hospitals successfully introduced in-patient screening to monitor patients for symptoms of EVD.

***Patient Safety Committees***

By September 30th, all supported hospitals had functional Patient Safety Committees (PSC). The size and composition of the PSC varies from hospital to hospital and the number of members per committee ranges from 10 to 40 people; generally composed of heads of sections, the Medical Superintendent and the hospital Matron. The PSC's met at least once a month to discuss IPC issues and develop action plans. In most hospitals, the IPC Focal person chaired the meetings, who also ensured minutes were distributed and action points were followed up. The PSCs worked closely with the IPC mentor and IPC Focal person to resolve some of the IPC challenges, especially with regards to supplies and environmental hygiene, and facilitated the creation of office space for IPC coordination.

***IPC offices***

To support IPC coordination in the hospitals, IPC offices have been established. This process started during the previous reporting period, and by September 30th, all of the supported hospitals had a dedicated IPC office equipped and furnished. The standard furniture and equipment in each of the offices include tables, chairs, laptops, printers and filing cabinets. All the hospitals have received the full set of equipment except Kailahun and Pujehun hospitals where the computers and printers will be delivered in October 2015. The office is used by the IPC mentor and IPC Focal person to plan work activities, file IPC documents and conduct smaller IPC meetings.

***Case Studies of IPC Improvements and Innovations***

*Case Study 1: Improved ward level Monitoring*

During the reporting period, IRC piloted a ward monitoring tool at Koidu government hospital. The tool is used to assess availability of IPC supplies, waste management, hand hygiene, appropriate use of PPE, sharps management and checking whether patients are screened for signs and symptoms of EVD. The various categories can be scored, which enables the IPC Focal Person and mentor to identify specific IPC challenges by ward to target refresher training and support. The tools also enable IPC performance to be compared across wards and presented to the hospital PSCs. The tool has been very well accepted by health care workers and senior management at Koidu Government hospital. The Medical Superintendent for Koidu Government hospital has used results from the tool to offer monthly incentives to the best performing ward. As a result of the success of this pilot, the ERC rolled out the tool to all hospitals.

*Case Study 2: Improving Adherence to IPC Protocols*

To encourage maintenance of improved IPC standards at the ward level, Connaught Hospital introduced a tool to assess IPC adherence. The IPC team developed the assessment tool and approved by the Connaught hospital management. The IPC monitoring tool, like the ward level assessment tool piloted at Koidu Government hospital, assessed hand hygiene practices, waste segregation, availability of IPC supplies and inpatient screening, the only difference being it did not assess appropriate use of PPE. The IPC team monitored every ward on a daily basis and calculated weekly scores for each ward, which were displayed on a noticeboard within the hospital. Where poor IPC practice was observed, the team explained to staff how practice could be improved and conducted a training. Best performing wards received non cash awards

from the hospital management. During the first week of July when the system was introduced, the average score for all wards was 69%. After conducting training for the wards that were performing poorly, by the end of the fourth week, the average score increased and was maintained at over 90% across all wards for the rest of the reporting period.

## III. Indicator Tracking

| Indicator | Target | Quarterly Result | | Cumulative | | Remark |
|---|---|---|---|---|---|---|
| Number of health care facilities supported[3] and/or rehabilitated by type (e.g., primary, secondary, tertiary) | 19 | 19 | | 19 | | |
| Number of health care providers trained by type (doctor, nurse, midwife and other[4]) disaggregated by sex[5] | 4890 | **M** | **F** | **M** | **F** | The training included trainee nurses attached to clinical areas and volunteers who were not part of the original targeted group, hence the number trained has surpassed the target. |
| | | 476 | 1156 | 1875 | 3567 | |
| *Doctor* | | 7 | 4 | 21 | 12 | |
| *Nurse* | | 118 | 905 | 386 | 2590 | |
| *Midwife* | | 1 | 23 | 2 | 113 | |
| *Other* | | 350 | 224 | 1466 | 852 | |
| Number of consultations, disaggregated by sex and age[6] | 266,377[7] | **M** | **F** | **M** | **F** | |
| | | **29,279** | **40,613** | **61,888** | **89,729** | |
| *Under-Five* | | 18,265 | 16,791 | 37,630 | 35,325 | |

[3] "Support" in this case means setting up screening and isolation procedures at the hospitals.
[4] Other includes Community Health Officers (CHOs), mortuary staff, porters, cleaners, ambulance drivers, X-ray technicians, laundry and kitchen staff, laboratory staff, blood bank staff, pharmacy staff, security and other staff.
[5] This will be defined as the number of healthcare workers that are trained on the modules from the "Safe provision of hospital services" training curriculum.
[6] The ERC will track "admissions" and not consultations. Additionally we will not be able to disaggregate this information to the level of detail normally needed (0-11 months; 1-4 years; 5-14 years; 15-49 years; 50-60 years; 60+ years) as part of this project. As with the currently ongoing portion of the project, the ERC will disaggregate only by sex, by under-five and over-five.
[7] This target is based off of a 5% increase in 2013 admission numbers.

| Indicator | Target | Quarterly Result | | Cumulative | | Remark |
|---|---|---|---|---|---|---|
| *Over-Five* | | 11,014 | 23,822 | 24,258 | 54,404 | Missing Bo and Kailahun data from February, Kailahun data from March and April. Previously, some hospitals had challenges maintaining records, however this has improved during the reporting period. Consultation numbers for Connaught and Moyamba for September are missing as there is a 1-2 month delay in consultation number reporting for larger hospitals. |
| Number and percentage of hospitals per month that score green on the national IPC assessment tool[8] | 19 (100%) | 2 (11%) | | 2 (11%) | | June was the first month the tool was rolled out. |
| Number and percentage of hospitals per month that show improvements in scores on the national IPC assessment tool[9] | 19 (100%) | 7 (37%) | | 7 (37%) | | 3 hospitals were unchanged and 9 hospitals declined. The declines were mainly due to the reduced frequency of PSC meetings in some hospitals and |

[8] Scoring green in this case means green in all 5 categories (Training, Management & Leadership, PPE Supplies, Screening and Isolation).
[9] Hospitals that showed improvement from July to September.

| Indicator | Target | Quarterly Result | Cumulative | Remark |
|---|---|---|---|---|
| | | | | stock-out of IPC supplies. |

**BENEFICIARIES REACHED**

| To improve safety of routine essential health services and protect health care workers (HCWs) and patients in government hospitals from nosocomial infections by educating HCWs; implementing standard operating practices; and monitoring hospital staff's adherence to the SOP. | **Target** | **Quarterly Result** | **Cumulative** | **Notes** |
|---|---|---|---|---|
| Health Care Workers | 4,890 | 1,632 | 5,442 | |
| Community Members | 266,377 | 69,892 | 151,617 | Missing Bo and Kailahun data from February, Kailahun data from March and April, Connaught for August and Connaught and Moyamba for September. There is a 1-2 month delay in consultation number reporting for larger hospitals. |

## IV. Constraints and Challenges

*Cleaning and Decontaminating the Work Environment*

Most hospitals do not have cleaners on their payroll, therefore cleaning is done by either volunteers or contracted out to companies. There have been disputes over non-payment between the contracted companies and the government, which sometimes leads to temporary work stoppage or interrupted cleaning and decontamination of clinical areas. The hospital administration, including the IPC Focal Person and the PSC, do not have full control over the workers or the quality of work. Some ERC partners reported improvements in hospitals where they included contracted workers in the IPC training program or trained them on the job. Participants in some PSC meetings raised improving the quality of cleaning as an action point and the PSC, IPC team and hospital management have engaged the management of the contracted companies to improve the quality of work. As a short term measure, in Lungi and Kissy Government hospitals, the PSCs mobilized all staff and have set aside Saturday and Wednesday respectively as days of general cleaning where all staff are involved.

In other hospitals, there is no laundry department and patients bring their own linen to the hospital, taking it home upon discharge. This poses the risk of carrying contaminated materials outside of the hospital. Clothes from patients who have been isolated are destroyed, however, and these patients receive new clothing upon discharge. Some of the hospitals targeted under this grant will benefit from a complementary

WASH project, funded by UK aid from the British people (DFID), which aims to improve water infrastructure and includes the renovation/construction of laundry facilities at the hospitals. Completion of this project will complement IPC initiatives and address some of the challenges faced in implementing comprehensive IPC in the supported facilities.

*Behavior Change*
Engaging staff to adopt improved IPC practices has proved challenging in some hospitals. One of the most common IPC breaches identified was mismanagement of sharps. Despite all the hospitals having adequate supplies of sharps boxes and HCWs trained on sharps management, finding sharps in undesignated places is still common in some hospitals. To solve the problem of IPC lapses, some hospitals identified IPC leads or champions among the clinical workers who would correct the IPC mistakes on site. There is the general notion that IPC is for EVD prevention and due to the decline of EVD across the country, there is a risk of increased complacency to adhere to IPC protocols compared to at the height of the outbreak. The efforts to ensure healthcare workers do not return to previous behaviors have paid off and vast improvements have been realized in the proper use of PPE, but generating effective behavior change has been a more gradual process.

*Irregular supply of IPC materials*
The irregular supply of IPC materials has regularly interrupted the smooth implementation of IPC activities. Items that were commonly in short supply included waste bin bags, for both clinical and general waste, and hand hygiene soap. Currently the MoHS use a push system for supply distribution, whereby they distribute items in stock irrespective of the demand. During the reporting period, a full time logistician was seconded to the National Infection Prevention and Control Unit (NIPCU) at MoHS to strengthen the coordination and distribution of supplies from the Central Medical Stores to the District Medical Stores and the hospitals. In some hospitals, the IPC mentors and IPC Focal persons worked closely with the PSCs and storekeepers to develop stock-tracking tools to monitor movement of IPC supplies at facility level. It was common for items to be out of stock in the wards but available in the stores.

*Water, Sanitation and Hygiene (WASH) facilities*
Most of the supported hospitals still do not have functional WASH facilities. The challenge of water distribution networks, adequate sanitation and appropriate waste management systems have impacted negatively on staff adhering to IPC protocols. Having the correct color coded refuse bags to facilitate waste segregation has been a challenge throughout the reporting period. In some hospitals, the problem of waste segregation has been solved by painting the bins with different colors to separate general waste from infectious waste. The ERC (with funding from UK aid from the British people (DFID)) and UNOPS are implementing complimentary projects to construct and rehabilitate WASH facilities and construct incinerators in the supported government hospitals and these improvements are expected to further improve adherence to recommended IPC protocols.

## V. Activities for the following reporting period

The Infection Control Africa Network (ICAN) and the Centers for Disease Control and Prevention (CDC) will be conducting a national level training on the new National IPC guidelines that will place an emphasis on general IPC practice rather than solely EVD-specific IPC activities. Following the national level training, ERC partners will roll out a new round of trainings at each hospital, led by the NGO IPC Mentor and the MoHS IPC Focal Person.

IPC Mentors will receive training on the new ward level IPC assessment tool and data collection using this tool will start in November 2015. This tool will enable partners to collect richer information on the progress of IPC efforts in hospitals.

The ERC will continue to provide daily mentorship and supervision in all 19 supported hospitals. The ERC will also work to strengthen the systems at the hospital and national level to support improvements in IPC. This will include continued support for the PSC and IPC offices, advocacy for more IPC supplies, improved coordination at the national level, and also improve monitoring and learning from the project.

The ERC is currently scaling up a complimentary intervention to upgrade WASH facilities in government hospitals across Sierra Leone. Partners implementing the IPC intervention will ensure that IPC protocols and WASH facilities are integrated to fully support each hospital.

## Annexes

**Hand Hygiene Demonstration, Bo Government hospital**

**Donning PPE in an IPC Training, Kenema Government Hospital**

**On the Job Training, Kailahun Government Hospital**